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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,523	11/26/2003	Ned L. Mountain	72449-026	8675
29493	7590	09/11/2007	EXAMINER	
HUSCH & EPPENBERGER, LLC 190 CARONDELET PLAZA SUITE 600 ST. LOUIS, MO 63105-3441			ZHONG, JUN FEI	
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,523	MOUNTAIN, NED L.	
	Examiner	Art Unit	
	Jun Fei Zhong	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-42 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11/26/2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application
- 6) Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 04/12/2004 and 07/05/2007. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

2. Claims 19-20 and 32-33 are objected to because of the following informalities:

Claims 19-20, it is not making any sense "error correction" by "unrecognition of input program number".

Claim 32, it is not clear whether "said processor" referring to "packet processor" or "mapping processor". Examiner interpreted as "said mapping processor".

Claim 33, limitation "mapper processor" should be changed to "mapping processor".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3-16, 23-28, and 30-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson (Pub # US 2002/0184649 A1) in view of Karasawa (Pub # US 2003/0112834 A1).

As to claim 4, Wilson discloses in a device (e.g., hub 104; Fig. 3) receiving multiplexed, packetized input data streams and outputting other multiplexed, packetized data streams, an output data stream mapper comprising:

an interface with an input data stream (e.g., receiver 218; Fig. 2) (see paragraph 0039);

a packet processor (e.g., multi-transport stream controller 228/328; Fig. 2 and 3) configured to identify and route a selected plurality of related packets (see paragraph 0033, 0035, 0041);

a memory (e.g., memory 406; Fig. 4) retaining at least one stored format table, said stored format table having at least one stored set of input program numbers associated with at least one stored and set of output program numbers, said memory further being configured to retain a current PAT (see paragraph 0057, 0059);

a mapping processor (e.g., processor 404 which is recited in multi-transport stream controller 328) configured to receive a packet from said packet processor (see paragraph 0059-0060; Fig. 5 and 6),

said mapping processor being configured output data stream having at least one reassigned output program number (see paragraph 0062).

Wilson fails to disclose comparing the current PAT to stored PAT program number.

Karasawa discloses the packet being a the current PAT from the input data stream, said mapping processor (e.g., controller 106) being further configured to compare at least one set of input program numbers in said the current PAT to said at least one stored set of input program numbers in said stored format table (e.g., step s204, controller 106 comparing program number from first transport stream to program number extracted from buffer) (see paragraph 0048-0050; Fig. 6);

said mapping processor (e.g., controller 106) being further configured such that if the at least one set of input program numbers in the current PAT is the same as said at least one stored set of input program numbers in said stored format table, then an output data stream is output having said at least one stored set of output program numbers from said stored format table (e.g., step s204, if program number from first

transport stream matches the second program number extracted from buffer, controller 106 go through other comparing steps and at step s212 controller 106 register the program number from the second transport which is held in the buffer) (see paragraph 0050, 0055; Fig. 6);

 said mapping processor being further configured such that if the at least one set of input program numbers in the current PAT are not the same as said at least one stored set of input program number in said stored format table, then an output data stream is output having at least one reassigned output program number (e.g., step s206, if program number from first transport stream is different from second program number extracted from buffer, controller 106 register the program number (i.e., new program number, because it is not stored in memory before) from the second transport which is held in the buffer) (see paragraph 0050, 0055).

 Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the comparison steps as taught by Karasawa to the packet transport system of Wilson to provide a multiplexing apparatus and method which can multiplex a plurality of transport streams by adaptively generating program specification information of a multiplexed transport stream without managing the program specification information of each input transport stream in advance (see paragraph 0025).

 As to claims 1 and 3, they contain the limitations of claim 4 and are analyzed as previously discussed with respect to claim 4 above.

As to claim 5, Karasawa discloses comparing input program number with stored program number from memory, then an output data stream is output having at least one reassigned output program number (e.g., step s206, if program number from first transport stream is different from second program number extracted from buffer, controller 106 register the program number from the second transport which is held in the buffer) (see paragraph 0048-0050; Fig. 6),

Wilson discloses the output data stream mapper of claim 4 wherein said mapping processor (e.g., processor 404) identifies another set of input program numbers having input program numbers that match the input program numbers in said current PAT, and another output data stream is output having reassigned output program numbers, said reassigned output program numbers being retrieved from another stored set of output program numbers (e.g., same input program number "1" in 604, different output program number "16" and "1" in 608; Fig. 6) (see paragraph 0062).

As to claim 6, Karasawa discloses the output data stream mapper of claim 4 wherein said mapping processor is further configured such that if the input program numbers in the current PAT are not the same as any stored set of input program numbers in the stored format table, then said mapping processor is configured to generate new program numbers and then output another output data stream having reassigned output program numbers, said reassigned output program numbers being said newly generated program numbers (e.g., step s206, if program number from first

transport stream is different from second program number extracted from buffer, controller 106 register the program number (i.e., new program number, because it is not stored in memory before) from the second transport which is held in the buffer) (see paragraph 0051; Fig. 6).

As to claim 7, Wilson discloses the output data stream mapper of claim 6 wherein said newly generated program numbers are generated by random number generation (see paragraph 0028).

As to claim 8, Wilson discloses the output data stream mapper of claim 6 wherein said newly generated program numbers are generated by incrementing numbers (see paragraph 0082).

As to claim 9, Karasawa discloses comparing input PMT PIDs with stored PMT PIDs from memory (e.g., step s207, comparing PMT PIDs from first transport stream with second PMT PIDs extracted from buffer) (see paragraph 0052; Fig. 6),

Wilson discloses the output data stream mapper of claim 4 wherein said mapping processor (e.g., processor 404) is further configured to receive a packet from said packet processor, the packet being the current PAT from the input data stream, said mapping processor being further configured to compare an input PMT PIDs in said current PAT to a known PMT PID;

said mapping processor being further configured such that if the input PMT PID in the current PAT is the same as the input PMT PID in the stored format table, then another data stream is output having output PMT PID from the stored format table (e.g., same input PMT PIDs "16" in 612, same output PMT PIDs "100" in 614; Fig. 6);

said mapping processor being further configured such that if the input PMT PIDs in the current PAT are not the same as the input program numbers in the stored format table, then another data stream is output having reassigned output PMT PIDs (e.g., the first stream in Fig. 6 has input PMT PIDs "16" in 612, and input program number "1" in 604; the second stream has output PMT PIDs "100" in 614 which is different than the input PMT PIDs "16");

Karasawa discloses said reassigned output PMT PIDs being from said stored format table (e.g., second PMT PIDs extracted from buffer) (see paragraph 0052; Fig. 6).

As to claim 10, Wilson discloses the output data stream mapper of claim 9 wherein said mapping processor is further configured such that if the input PMT PIDs in the current PAT are not the same as the input PMT PIDs in the stored format table, then said mapping processor is configured to generate new PMT PIDs and then output another data stream having reassigned output PMT PIDs (e.g., the third stream in Fig. 6 has input PMT PIDs "800" in 612, the fourth stream has input PMT PIDs "400" in 612; the fourth stream has output PMT PIDs "102" in 614),

Karasawa discloses said reassigned output PMT PIDs being said newly generated PMT PIDs (e.g., step s207, comparing PMT PIDs from first transport stream with second PMT PIDs extracted from buffer) (see paragraph 0052; Fig. 6).

As to claims 11-12, they contain the limitations of claims 7-8 and are analyzed as previously discussed with respect to claims 7-8 above.

As to claims 13-14, they contain the limitations of claim 4 and are analyzed as previously discussed with respect to claim 4 above.

As to claims 15-16, they contain the limitations of claims 7-8 and are analyzed as previously discussed with respect to claims 7-8 above.

As to claims 23 and 24, Wilson discloses a network interface with said mapping processor and packet processor (e.g., receiver 218) (see paragraph 0039; Fig. 2 and 3).

As to claim 25, Karasawa discloses the device of claim 4 wherein said memory is updated by a received packet processor table (e.g., program number is temporarily held in buffer 103; i.e., if a new stream coming in which will replace the old stream and hold in buffer) (see paragraph 0049).

As to claim 26, Karasawa discloses the device of claim 4 wherein said stored format table stores program numbers and transport streams (e.g., the transport stream which includes program number) (see paragraph 0043).

As to claim 27, Karasawa discloses storing transport packets (see paragraph 0043).

Wilson discloses the tables is comprised of a single table having stored input program numbers (604), stored input transport streams (602), stored output program numbers (608) and stored output transport streams (606) (see Fig. 6).

As to claim 28, Karasawa discloses storing transport packets (see paragraph 0043).

Wilson discloses the format tables is comprised of an input table and an output table (e.g., session table 600), said input table having stored input program numbers (604) and stored input transport streams (602) and said input table being associated with said output table, said output table having stored output program numbers (608) and stored output transport streams (606) (see Fig. 6).

As to claim 30, Wilson discloses the device of claim 4 further including a preference table (e.g., operator defines number of PIDs) (see paragraph 0068).

Karasawa discloses storing transport packets (see paragraph 0043).

As to claim 31, Karasawa discloses the device of claim 4 wherein said memory further includes a temporary storage of at least one incoming PMT (e.g., PMT is temporarily held in buffer 103) (see paragraph 0049).

As to claim 32, Wilson discloses the device of claim 4 wherein said processor is configured to check for a unique PID for each input PMT (see paragraph 0060).

As to claim 33, Wilson discloses the device of claim 32 wherein said mapper processor is further configured to assign new PIDs for input PMTs such that each output PMT has a unique PID (see paragraph 0060, 0062).

As to claim 34, Wilson discloses the device of claim 4 wherein said mapping processor is further configured to check if an incoming program number corresponds to a unique output program number (see paragraph 0007).

As to claim 35, Wilson discloses the device of claim 34 wherein said mapping processor is further configured to assign a unique output program number for each incoming program (see paragraph 0062).

As to claim 36, Karasawa discloses the device of claim 4 further comprising a memory for storing at least one of a newly generated PAT or a newly generated PMT (e.g., step s206, if program number from first transport stream is different from second

program number extracted from buffer, controller 106 register the program number (i.e., new program number, because it is not stored in memory before) from the second transport which is held in the buffer) (see paragraph 0050, 0055).

As to claim 37, Wilson discloses the device of claim 4 further comprising a capacity limit on a number of programs (see paragraph 0106).

As to claim 38, Wilson discloses the device of claim 4 further comprising a program number remapping table (e.g., session table 600; Fig. 6).

As to claim 39, Wilson discloses the device of claim 38 wherein said program number remapping table includes an item number (610), an input designation (602), an output number (608) and an activity designation (606) (e.g., session table 600; Fig. 6).

As to claim 40, Wilson discloses the device of claim 4 further comprising a PID remapping table (e.g., PID allocation map 800; Fig. 8).

As to claim 41, Wilson discloses the device of claim 40 wherein said PID remapping table includes an item number, an input designation, an output number, an output designation and an activity indicator (see paragraph 0067-0069).

As to claim 42, Wilson discloses the device of claim 38 wherein said mapping processor is further configured to assign unique PID numbers for each output data stream (see paragraph 0060, 0062).

5. Claims 2, 18-21, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Karasawa as applied to claims 1, 3-16, 23-28, and 30-42 above, and further in view of Yuen et al. (Pub # US 2003/0190138 A1).

As to claim 18, note the discussion above, both Wilson and Karasawa fail to disclose the mapping processor is further configured for error correction.

Yuen discloses the mapping processor (e.g., controller 702) is further configured for error correction (see paragraph 0231).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide error correction as taught by Yuen to the packet transport system of Wilson as modified by Karasawa because it can avoid data loss and confuse system.

As to claim 19, Yuen discloses the output data stream mapper of claim 18 wherein said error correction is by repeated unrecognition of a single input program number (e.g., error counter adding numbers of errors) (see paragraph 0933).

As to claim 20, Yuen discloses the output data stream mapper of claim 18 wherein said error correction is by unrecognition of at least two different input program numbers (e.g., error counter adding numbers of errors; i.e., it is obvious to set the error counter's threshold at two) (see paragraph 0933).

As to claim 29, Yuen discloses the device of claim 4 further comprising a display notifying a human operator (e.g., viewer) when the input program numbers are not found in said stored format table (e.g., an error, a warning message display to a viewer) (see paragraph 0449).

As to claim 2, it contains the limitations of claim 29 and is analyzed as previously discussed with respect to claim 29 above.

6. Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Karasawa as applied to claims 1, 3-16, 23-28, and 30-42 above, and further in view of Eldering et al. (Patent # US 6704930 B1).

As to claim 21, note the discussion above, both Wilson and Karasawa fail to disclose high definition content.

Eldering discloses data streams include high definition content (see col. 4, lines 8-14).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide high definition data as taught by Eldering to the packet transport system of Wilson as modified by Karasawa because it is desirable to offer enhanced digital programming services (see col. 1, lines 46-49).

As to claim 22, Eldering discloses statistically multiplexed (see col. 4, lines 16-38; Fig. 2).

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilson in view of Karasawa as applied to claims 1, 3-16, 23-28, and 30-42 above, and further in view of Eldering et al. (Patent # US 6704930 B1)..

As to claim 17, note the discussion above, both Wilson and Karasawa fail to disclose re-timestamp output data.

Gordon discloses re-timestamp output packetized data streams (see paragraph 0012).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide re-timestamp output data as taught by Gordon to the packet transport system of Wilson as modified by Karasawa because it can synchronize the real time and non-realtime content (see paragraph 0012).

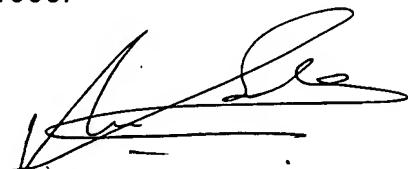
Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jun Fei Zhong whose telephone number is 571-270-1708. The examiner can normally be reached on Mon-Fri, 7:30-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JFZ
09/01/2007



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